

Locating Device with Floating Pressure Compensator. —

The work *A*, shown in Fig. 5, has been partially machined in a previous operation, and the flange has also been drilled so that one of the holes can be used for driving purposes. The machine to which this device is applied is a turret lathe of the horizontal type, and the body *B* is screwed to the spindle end *C* in the usual manner. The pin *T* is set into a boss in the face of the fixture and acts as a driver in one of the flange holes. Two steel rings *F* and *G* act as approximate locators for the work when it is first placed on the fixture. Two cylindrical steel cams *H* and *J* are accurately ground to fit the central hole in the fixture, and are operated by the rod *M* which is threaded right- and left-hand, respectively, at *N* and *O*. Each cam is milled to a 20-degree angle at *K* and *L*, three of these slots being equally spaced around the periphery so that their angular surfaces control the movement of the locating pins *D* and *E*. The coil springs return the pins to an inactive position when released by the cams. A plug *P* is placed in the spindle as shown in the illustration, for the purpose of providing a seat for the coil spring *Q* which assists in the releasing of the pins after the machining has been done. The two stop-pins *R* and *S* limit the movement of the cams and take all the thrust of the twisting action of the operating screw.

In this connection it is well to note that these stop-pins are a nice fit in the cam slots, while the locating pins have a side clearance in the angular slots of 0.010 inch so that there is no possibility of trouble being caused by friction at these points. Attention is further called to the fact that the action of the cams is such that a true floating motion is produced when the screw is operated so that all of the locating pins are set up with an equal amount of pressure. A floating action of this nature may be readily applied to holding fixtures for a great variety of work.

Chucking Fixture with Floating Clamps and Taper Locating Plug.—A somewhat unusual condition is shown in Fig. 6, the work *A* being a special clutch flywheel which has been